

GenCodeE

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Chapter 1

GenCodeE

1.1 GenCodeE (v1.7 et v2.2)

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*****
                        GenCodeE (v1.7 et v2.2)
                E code generation module for MUIBuilder
                Archive of January 1995, the 8th
                © Copyright 1995, Lionel Vintenat
*****

~Introduction~
~Generated code~
~History      ~~~
~Distribution ~
~Bugs~~~~~
~Author ~~~~~
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1.2 Introduction

In this MUIBuilder release, you will find two GenCodeE : the 1.7 version and the 2.2 version. The first one generates code for Amiga E v2.1b and the second one for Amiga E v3.0b. As Amiga E v3.0 is a major update compared to Amiga E v2.1b, it seemed to me that it was necessary to make two different code generation modules. In the future, all the GenCodeE with 1.x as version number will generate code for Amiga E v2.1b and those with 2.x as version number will generate code for Amiga E v3.x. The generated codes by these two modules are not really different, but the 2.2 version heavily exploits the new features of Amiga E v3.0, especially the OO aspect.

To make such a code generator isn't as easy as it seems. Indeed, the generated code must be as perfect as possible to avoid to the programmer to modify it, but nevertheless it must be readable if the programmer really wants to modify it. After a lot of attempts, I think I reach "a good level". However, I haven't yet had time to really test the code generated by these two new GenCodeE on a big application, so it must be possible to enhance some details. So don't hesitate to send to me your comments and your suggestions (see the author).

Finally, you will need Mac2E (v4.0+ is better) to use the generated code and in addition EPP (v1.4d is better) for GenCodeE v1.7. These two programs are available in the PD collections. If you haven't them, stop reading now and find them ! In the same way, FlexCat (also available in PD collections) is heavily recommended to automatically generate localization code, but it isn't absolutely needed.

NOTE : The two GenCodeE of this release (and all the other files) are directly taken from the last separated release of GenCodeE on aminet, excepted for the update of this documentation. But since this release, Amiga E v3.1a is out, and it supports macros in a compatible way with Mac2E. So if you own this version of Amiga E, you needn't Mac2E anymore. That's why I added to the E directory of MUIBuilder the EMODULES directory which contains mui.e (and its compiled version mui.m). This file is the E equivalent of mui.h, and so is directly usable with EC. Note that mui.e is a "quick" translation of mui.h and that I didn't test anything, however, it shouldn't be too buggy, and so the sources produced by GenCodeE should compile without trouble with Amiga E v3.1a.

1.3 Generated code

The code generated by GenCodeE is now too complex to be explained simply. So, I chose an example (a significant one) to expose it rather than long (and difficult) explanations. Begin by watching in MUIBuilder how is defined the example application DemoGenCodeE, especially for notifications. After, look at the generated code and above all the main source DemoGenCode.em in which I put a lot of comments. Make after some experiments with modifications of DemoGenCodeE definition in MUIBuilder to see how the code generator behaves. Try too the different generation options : declarations, code, notifications, environment and locale. I think that this will be enough for everybody to understand how GenCodeE is behaving. If however you meet problems, write to me (see the author).

DemoGenCodeE has only one window. Inside this one, you can see a 'Click' group and a 'Quit' button. I let you guess what is the effect of this last one... In the 'Click' group, you can see 4 buttons and a text gadget. When you click on one of the buttons, this changes the text gadget contents each time in a different way :

- the 'Put Constant String' button modifies the text gadget contents by a notification which directly put in a constant string
- the 'Put Variable' button modifies the text gadget contents by a notification which directly put in a variable contents
- the 'Return ID' button returns an ID (after a click on this button) when the MUIM_Application_Input method is called, and in this case, the text gadget contents is modified by a set() call
- the 'Call Hook' button calls for each click on this button a hook function which modifies the text gadget contents

DemoGenCodeE also offers an ARexx command "change_text" which modifies too the text gadget contents.

All these cases cover all the different codes that can be

generated by GenCodeE.

1.4 History

Version 1.0 : - 1st distributed version with MUIBuilder v1.0
 Version 1.1 : - a little bug fixed (GenCodeE sometimes forgot to indent the beginning of the code)
 - version never distributed
 Version 1.2 : - localization support added
 - version never distributed
 Version 1.3 : - environment mode added
 - 2nd version distributed with MUIBuilder v1.1
 Version 1.4 : - 3rd distributed version, external to the MUIBuilder archive
 - must be used with MUIBuilder v1.1
 Version 1.5 : - completely new generated code
 - 4th distributed version
 - must be used with MUIBuilder v2.0, Amiga E v2.1b and
 EPP v1.4d
 Version 1.6 : - recompiled with Amiga E v3.0e
 - fixed bug : GenCodeE generated not initialized
 strings as if they were
 - fixed bug : GenCodeE generated stupid things for
 menus
 - fixed bug : generated code could cause enforcer hits
 at execution time
 - dispose() procedure is more secure
 - heading comments are better (BTW I hope :-))
 - now the sources are provided
 Version 1.7 : - fixed bug : GenCodeE sometimes forgot to generate
 "MODULE 'utility/hooks'" when it was needed

 Version 2.0 : - completely new generated code
 - 4th distributed version
 - must be used with MUIBuilder v2.0, Amiga E v3.0b and
 EPP v1.4d
 Version 2.1 : - recompiled with Amiga E v3.0e
 - fixed bug : GenCodeE generated not initialized
 strings as if they were
 - fixed bug : GenCodeE generated stupid things for
 menus
 - fixed bug : generated code could cause enforcer hits
 at execution time
 - dispose() method is more secure
 - heading comments are better (BTW I hope :-))
 - now the sources are provided
 Version 2.2 : - fixed bug : GenCodeE sometimes forgot to generate
 "MODULE 'utility/hooks'" when it was needed

1.5 Distribution

All the files of the MUIBuilder archive linked to E language stay under author copyright. None modifications of these files are

authorized without author permission.

In the same way, these files can't be separated from the original MUIBuilder archive, and so their distribution conditions are the same as for this archive. In particular, you use these files at your own risk.

1.6 Bugs

GenCodeE hasn't known bugs. But MUIBuilder has one annoying bug which find itself back in the generated code. This bug only appears when you don't generate a whole application but a single object :

- in this case, MUIBuilder only generates notifications internal to the generated object : for instance, if A object notifies B object, this notification won't appear if you only generate A object or B object

This bug should be corrected in MUIBuilder v2.2 (it would be yet done according to Eric, but shuuuut :-)).

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